FOURTH OF JULY WASH
FCD GAGE ID# 5043

STATION DESCRIPTION

LOCATION – The gage is located in southwest Maricopa County about one mile north of Agua Caliente Road. Latitude N 33° 16' 41.7"; Longitude W 113° 07' 53.3". Located in S01 T2S R9W in the Cortez Peak 7.5-minute quadrangle.

ESTABLISHMENT – Gaging was established on March 14, 2002.

DRAINAGE AREA – The drainage area is about 3 mi^2.

GAGE – The gage is a pressure transducer type instrument. The transducer diaphragm is at elevation 0.20 feet gage height, levels of September 30, 2004, based on a tape up from the ground at the PT.

There is one crest gage at this location. It is located on the left bank near the pressure transducer. Pin elevation is 0.78 feet gage height or 1,110.78 feet gage height, levels of February 9, 2005.

There is no staff gage at this location.

ZERO GAGE HEIGHT – Zero gage height is defined as 1,110.00 feet NAVD 1988.

HISTORY – No previous history at this location. Gaging established on March 14, 2002.

REFERENCE MARKS –

RM-4JULY is an FCD brass cap located high on the left bank about 8 feet upstream of the gage standpipe. Elevation 14.80 feet gage height or 1,124.796 feet NAVD 1988, levels of March 27, 2002. Northing: 830705.157 feet; Easting 329247.290 feet.

RP1 is the top of a large rock in the channel about 6 feet downstream from the pressure transducer. The mark is painted orange and marked black. Elevation 2.35 feet gage height, levels of March 27, 2002. The spot was not located on September 30, 2004 or February 9, 2005. Therefore, the reference is considered lost and unusable.

There are eight monumented cross sections in the downstream reach at this site. All elevations are NAVD 1988 datum.

Cross section one is located at the gage cross section. XS1LB is the left bank rebar marker at elevation 1,122.10 feet. XS1RB is the right bank rebar marker at elevation 1,116.03 feet.

Cross section two is located about 140 feet downstream from cross section one. XS2LB is the left bank rebar marker at elevation 1,116.51 feet. XS2RB is the right bank rebar marker at elevation 1,113.24 feet.

Cross section three is located about 200 feet downstream from cross section two. XS3LB is the left bank rebar marker at elevation 1,122.24 feet. XS3RB is the right bank rebar marker at elevation 1,112.43 feet.

Cross section four is located about 170 feet downstream from cross section three. XS4LB is the left bank rebar marker at elevation 1,113.88 feet. XS4RB is the right bank rebar marker at elevation 1,111.04 feet.

Cross section five is located about 100 feet downstream from cross section four. XS5LB is the left bank rebar marker at elevation 1,114.91 feet. XS5RB is the right bank rebar marker at elevation 1,110.19 feet.

Cross section six is located about 130 feet downstream from cross section five. XS6LB is the left bank rebar marker at elevation 1,110.70 feet. XS6RB is the right bank rebar marker at elevation 1,111.95 feet.

Cross section seven is located about 120 feet downstream from cross section six. XS7LB is the left bank rebar marker at elevation 1,110.89 feet. XS7RB is the right bank rebar marker at elevation 1,109.18 feet.

Cross section eight is located about 100 feet downstream from cross section seven. XS8LB is the left bank marker at elevation 1,110.02 feet. XS8RB is the right bank rebar marker at elevation 1,108.72 feet.

CHANNEL AND CONTROL – The channel is straight up and downstream from the gage cross section for several hundred feet. The channel bends gradually about 400 feet downstream from the gage. No real low flow control exists. The channel is the control at the gage cross section, at flows >150 cfs.

The channel bottom is mostly mixed sand and gravel, with some rock outcrops near the gage cross section, and at several locations in the channel. The left bank is high with the right bank somewhat lower. The banks are sparsely vegetated, mostly with creosote and palo verde.

RATING – The current rating is Rating #1, applied as of gage installation. The rating is based on survey data from three cross sections. An HEC-RAS model was developed from the survey data.

DISCHARGE MEASUREMENTS – Indirect discharge measurements could be made in the reach downstream from the gage. Use a combination of monumented cross sections for an indirect discharge measurement. Direct measurements are not practical given the distance from the office.

POINT OF ZERO FLOW – The PZF is at about -0.15 feet gage height, levels of February 9, 2005.

FLOODS – 1,270 cfs at 3.08 feet gage height on August 13, 2004.

REGULATION – None

DIVERSIONS – None known

ACCURACY – Fair

UPDATE - July 14, 2011
D E Gardner